

Evaluation of the Literacy and Numeracy Screening Program in Three Types of National Primary Schools in Malaysia

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Abstract: Literacy and numeracy screening (LINUS) is a program implemented by the Malaysia Ministry of Education in primary schools nationwide to increase literacy skills of students in year 1–3. This study aimed at assessing the LINUS program implemented since 2010. Model of Critical Literacy by Freebody and Luke (1990) was applied in this study. Reading and writing tests for Malay language subject were developed from the module of LINUS program and conducted on 120 students from three different types of schools, namely national schools, national-type Chinese schools, and national-type Tamil schools. The results showed that the level of reading and writing of students was average. One-way analysis of variance tests showed significant differences between ethnic and type of schools with the reading and writing proficiency of the students; students of national schools scored the highest in reading test whereas the students of national-type Chinese school performed the best in writing test. In contrast, family socioeconomic status of the students did not influence their reading and writing proficiency. Therefore, teachers should take into account ethnic and type of schools in implementing the LINUS program as the main factors determining the level of literacy, achievement, and success of the LINUS program.

Keywords: *literacy and numeracy screening; Malay language; model of critical literacy; national schools; national-type schools*

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0 Introduction

The education system in Malaysia strides rapidly over the development of the country in the present millennium. The government, through the Ministry of Education, has designed and implemented various sustainable changes toward realizing the aspirations of being a developed country by the year 2020. Changes in the educational arena in the country are beginning to show the results in policies, acts, or reports such as the National Education Policy, Razak Report 1956, Rahman Talib Report 1960, the National language Act 1967, the Cabinet Committee Report 1979, and the New Education Act 1996.

1. Statement of the problem

The existing system of education in Malaysia such as primary education system, secondary education system, and the higher education system has expanded rapidly in line with the National Education Philosophy, namely to produce balanced students physically, emotionally, spiritually, and intellectually. Nowadays, the national education expanded through system of pre-school education or system of early childhood education. Through this system, children will be introduced to the school system since the age of 4 years old with an emphasis on literacy proficiency in reading, writing, and arithmetic. Rationalization of teaching early literacy is to ensure that children have mastered the basic skills before the start of schooling in year 1. This is to ensure the continuity of the learning session as weakness in mastering the basic literacy skills of the students will have an impact on their learning process^[1].

According to the master plan of education development 2006–2010 (2006), lower primary students who suffer

from academic deficit decreased from 9.1% in 2003 to 7.7% in 2004; while, in 2005, it was found that 4.4% of the students in primary schools still have not mastered reading skills. This report has shown the improvement in the literacy rate causing the Ministry of Education to take appropriate action to eliminate the problem of mastering reading skills to be reduced to zero.

On the other hand, according to the Malaysia Education Blueprint 2013–2025^[2], the number of students who performed below minimum score of TIMSS assessment in the skill of reading was more than double that of the OECD countries. Literacy laid the foundation for learning in primary education and beyond. Reading and writing are implicit in the basic right to education. Without these abilities, it is nearly impossible for students to attain higher education and survive in modern society. Literacy skills are crucial to a person's ability to develop fully as an individual, to live a satisfying and rewarding life and to participate fully in our society.

In response to this demand, the transition class was conducted by remedial teachers in schools. This remedial education is a special program in the form of teaching and learning activities to help students with learning problems such as lack of basic literacy skills in the classroom.

After realizing the problems that occur cannot be resolved through remedial classes alone, the ministry of education has introduced the program of KIA2M or intervention class on early reading and writing. The program is designed to help the low performing students, especially the students in year 1 to master the basic skills of reading and writing. The program was implemented full-time based by the Malay language teachers at year 1 nationwide in both national primary schools and national-type primary schools^[3]. In Malaysia, the national schools have Malay language as the medium of instruction while national-type schools use an ethnic group mother tongue (Chinese or Tamil) as the medium of instruction.

Data of the remedial students in the school who "recovered" after the intervention program of KIA2M indicated that this program had not managed to put all the students who followed the class into the right track. Out of 53,544 primary school children who followed the intervention program, only 28,801 students or 53.8% had been restored and can master the skills of reading, writing, and arithmetic^[4]. The latest data show that 105,255 (23%) of the total 463,990 students have not mastered reading skills in July 2008^[5].

After that, since 2010, this program was replaced by the literacy and numeracy screening (LINUS) program. LINUS is an acronym of the "LINUS program" and useful to help the students in primary schools, in phase one starting from year 1 to year 3 who drop off in the mastery of basic skills of reading, writing, and arithmetic. All year 1 teachers who teach Malay language are required to attend the courses of instruction and learning of the module of LINUS beginning in 2010 conducted by the teacher education division, Ministry of Education. This program was implemented in all national primary schools, national-type Chinese schools, and national-type Tamil schools. There are three stages of the filter, namely filters 1 (in year 1), filter 2 (in year 2), and filter 3 (in year 3).

The entire 1st-year students at the beginning of the school session are required to sit for the first filter test. Based on the results of the diagnostic test, students will be classified as candidates for the intervention LINUS program or not. Usage of this screening test is to identify the students who need to attend an intervention class to learn the reading and writing skills by mastering the 12 reading skills constructs. The LINUS program is run entirely by the Malay language teacher in year 1. Teachers who run the program will isolate the year 1 students who fail in the screening test to follow this intervention program^[6].

Thus, the literacy education in Malaysia, especially in the Malay language is becoming an important subject in school because the literacy program has been programmed formally under the LINUS program and also became the government's strategy in the national key result area (NKRA). Its mission is to develop high literacy skills among the students, namely the literate youths with competitive and dedicate as the frontier of the year 2020^[7]. To avoid wastage in education, early exploration of the LINUS program is needed to determine the reading and writing level of the students. It helps the poor students to improve their potential so that they can become useful citizens in the future.

Ethnic is a main factor that affects the language learning of the students. Studies conducted by Dixon et al.^[8], Prevo et al.^[9], Hopewell and Escamilla^[10], and Lopez et al.^[11] found that ethnic factor affects literacy skills and language development of preschool students. Research on reading intervention class done by the Education Planning Division, Ministry of Education^[4] found that the difficulty faced by the intervention students, especially students in years 1 to master the

skills of reading and understanding is due to lack of exposure to the usage of Malay language, influence of the native languages, and dialects of the students. All of these variables also influence the language proficiency which involves reading and understanding the reading text.

Mahzan et al.^[12] demonstrated the importance of ethnic diversity and languages in Malaysia in improving reading ability and reading comprehension of written materials; interest of the students is different and they are more likely to read the literature consisting of native language and their own ethnic background than reading the literature of other ethnic since childhood. These problems persist until adulthood. Accordingly, the study done by Prevo et al.^[9] also revealed that maternal language use was related to ethnic language vocabulary. Growing concern has been expressed regarding achievement gaps in language that appears to be correlated to learners' socioeconomic status (SES). Findings by Wilson et al.^[13], Prevo et al.^[9], and Solari et al.^[14] showed the significant impact of SES on academic outcomes for the kindergarten students. Their results showed that the children from low SES had very low levels of language and literacy skills scores. Hasnalee and Zulkifley^[15] found that parents from low-income households will focus more on finding income for basic needs than paying particular attention to their children's academic development. According to Prevo et al.^[9], during the transition to formal reading education, one should be aware that children from low-SES families receive less host language reading input; furthermore, the research done by Kuhl^[16] found that SES should be considered a proxy for the opportunity to learn and that the complexity of language input is a significant factor in developing brain areas related to language.

Therefore, this study aims at finding out whether the factors of ethnicity, type of school, and SES contribute to literacy rate differentials among the students in three different types of primary schools in Malaysia.

1.1 Objectives of the Study and Research Questions

The study objectives are as follows:

1. Find out the reading and writing level of students who have completed the LINUS program.
2. Investigate the significant differences between the ethnic, type of schools, and family income on the reading and writing proficiency of the students in the LINUS program.

Based on the given objectives, the study is designed to answer the following research questions:

1. What is the level of reading and writing of students in the LINUS program?
2. Are there significant differences between the ethnics, type of schools, and family income on reading and writing proficiency in the LINUS program?

1.2 Theoretical Framework

In literacy research, the Model of Critical Literacy^[17,18] makes the point that "literate" people adopt four "resource roles." These four roles are resource: Code breaker, meaning maker, user text, and text analysis.

The "code breaker" role includes basic skills associated with knowing the technology of the written symbols of the language and understanding the relationship between spoken and written symbols. With respect to the nature of sound-symbol relationships in English language (Bahasa Inggeris), the degree of consonant clustering and the diversity of Bahasa Inggeris vocabulary together are associated with the necessity for an alphabetic or at least semi-alphabetic script.

The "meaning maker" role involves learners bringing their technology of code-breaking to the different structure of the various types of text they encounter and the experiences portrayed in those texts. The learners participate in meaningful understanding and composing written, visual, and spoken texts, taking into account each text's interior meaning systems in relation to their available knowledge and their experiences of other cultural discourses, texts, and meaning systems^[19].

The "user text" role means that in addition to participating in the text, learners must also assume the role of using the text of a variety of situations, each with a different socio-cultural purpose. A successful reader is able to participate in social activities in which those written texts play a central part. Not only do people learn about the technology of the script and about how to work out the meaning or possible meanings of written texts but they also learn through social experiences what our culture counts to be adequate reading for school, work, leisure, or civil purposes. Being a successful text-user, then, entails developing and maintaining resources for participating in "what this text is for, here and now"^[20].

Finally, the “text analyst” role involves learning how to critically examine the text to gain understandings about subsurface influences and themes and to find out why texts are written in particular ways to achieve particular effects. All discourse entails a particular construction or version of its readership with respect not only to the degree of assumed knowledge topic but also to more dispositional resources such as the ideological position of the reader^[21].

1.3 Conceptual Framework

The conceptual framework developed in this study is related to literacy skills in reading and writing in Malay language in terms of aspects of children’s level of mastery such as the tested knowledge, reading, and writing competencies in three primary schools according to the variables of ethics, school types, and SES as shown in Figures 1 and 2. Related skills are taught through the LINUS program that was implemented in all national primary schools in Malaysia, nowadays. Based on this phonetic system, the ministry of education developed a module LINUS according to the model of critical literacy skills so that

the students will master the reading and writing skills at a satisfactory level.

2. Methodology

This study applied the evaluation methods to study the Malay language literacy among the students in stage two at national primary schools and national-type primary schools. Evaluation study is one of the most popular research methods of measurement and assessment in various fields, especially in the social sciences.

2.1 Location, Population, and Sample

Petaling District is one of the nine districts in the state of Selangor Darul Ehsan. Petaling District is divided into four main sub-districts, namely Bukit Raja, Damansara, Petaling, and Sungai Buloh. Petaling District is also divided into two, namely Petaling Jaya and Petaling Utama. A total of 105 national primary schools, 20 national-type primary schools (Chinese), and 16 national-type primary schools (Tamil) are found in Petaling district. This study was conducted in only three schools, namely national school of Puchong

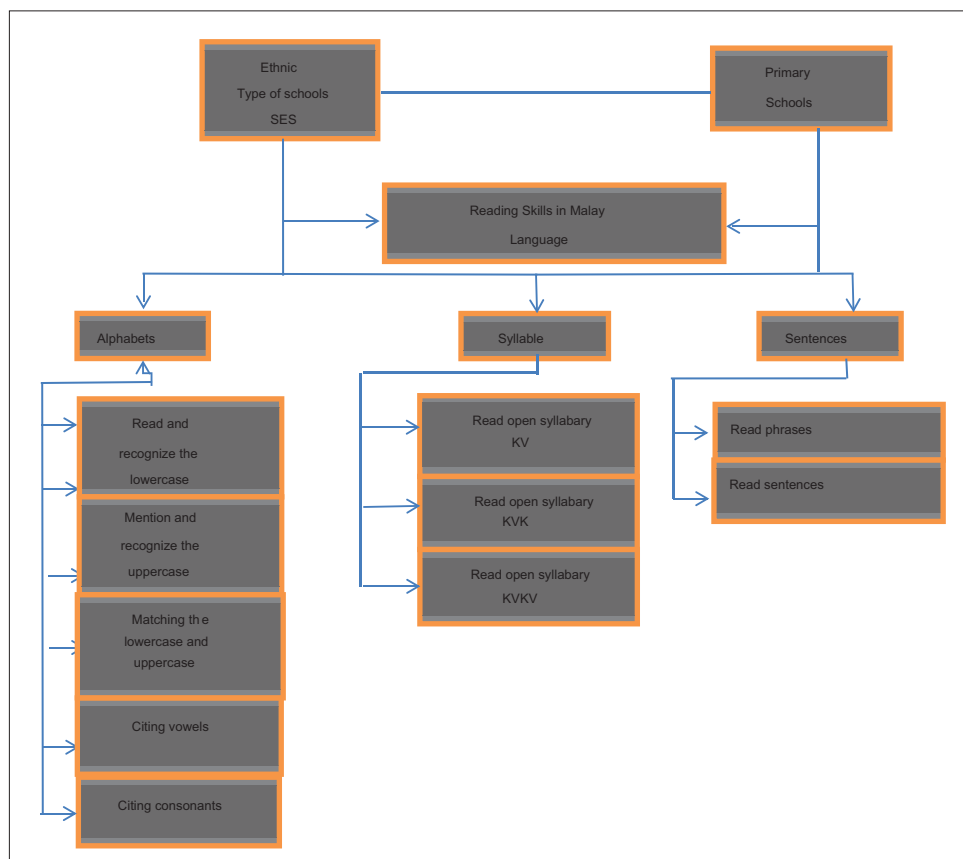


Figure 1. Conceptual framework on reading skills in the Malay language

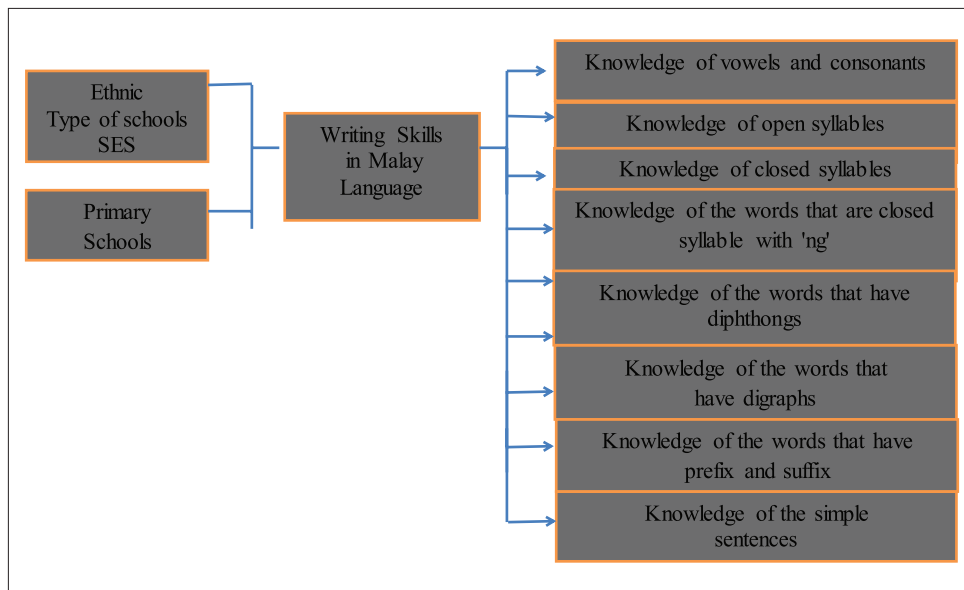


Figure 2. Conceptual framework on writing skills in the Malay language

Perdana, national-type school (Tamil) of Vivekananda, and national-type school (Chinese) of Yoke Nam. One LINUS class was randomly selected from each school for the purpose of evaluation in this study. Therefore, the researcher has 120 students in total from these three schools which consisted of various ethnic, religious, and both genders in this study.

2.2 Research Instruments

Reading and writing test was modified based on the Model of Critical Literacy^[17,18] and the screening test of LINUS program made by the Ministry of Education to suit this study.

In the reading test, there are 12 divisions consisting 66 items as below:

Division 1: Ability to name a vowel (5 items) and consonants (10 items)

Division 2: Ability to read the open syllables (5 items)

Division 3: Ability to read the words that contain open syllables (5 items)

Division 4: Ability to read the closed syllables (5 items)

Division 5: Ability to read the words containing closed syllables (4 items)

Division 6: Ability to read the words containing the closed syllable of “ng” (5 items)

Division 7: Ability to read the words containing diphthongs (5 items)

Division 8: Ability to read the words containing vowels (5 items)

Division 9: Ability to read the words containing digraph and combined consonant (5 items)

Division 10: Ability to read the words containing prefix and suffix (5 items)

Division 11: Ability to read the simple sentences (4 items)

Division 12 constructs: Ability to read and understand the stimuli material (3 questions).

Writing test consists of 12 divisions containing 65 items as below:

Division 1a. Write the vowel given by teacher (5 items).

Division 1b. Write consonants called by the teacher (10 items)

Division 2. Complete the word by drawing (5 items).

Division 3. Write the word on the picture (5 items).

Division 4. Complete the word by drawing (5 items)

Division 5. Write the word on the picture (5 items)

Division 6. Write the word on the picture (5 items)

Division 7. Write the word on the picture (5 items)

Division 8. Arrange the letters to form words by drawing (5 items)

Division 9. Write the word on the picture (5 items)

Division 10. Write the word on the picture (5 items)

Division 11. Arrange words to be correct sentence (3 items)

Division 12. Write a paragraph on the image (2 items).

The reading and writing tests were then checked for content validity by two LINUS teachers and a LINUS main coach at the school. A pilot study was carried out to obtain the reliability of the items in the LINUS instrument. This pilot study was conducted among the 30 years four students in national-type schools (Tamil) in Negeri Sembilan. Results of the study found that a Cronbach’s alpha value was at

0.70 levels. Some items in the questionnaire were not understood and difficult to be answered by the respondents. Thus, the researcher has restructured them with some improvement in the questionnaire.

2.3 Demographics of Respondents

Table 1 presents the demographic profile of the respondents.

Table 1 shows that the number of male students was 56 (46.7%) compared to 64 (53.3%) female students. This showed the number of female respondents exceed by 8 the number of male respondents.

The distribution according to ethnic showed that most respondents were Chinese with 51 students (42.5%) followed by Indian with a total of 49 students (40.8%) and Malay only consisted of 20 students (16.7%). The distribution of the various ethnics was due to the involvement of three different schools by ethnic. Even so, the number of Malay students was fewer than the Chinese and Indian students due to the Chinese and Indians who studied at the national school was more than the number of Malays in national-type schools.

There were three schools involved in the study, namely national schools, national-type Chinese school, and national-type Tamil schools. Each school involved 40 respondents (33.33%), respectively. Amount is assigned the same from each school to facilitate the analysis process to avoid bias.

In terms of family income, it was found that the parents of 34 students (28.3%) had a total monthly income of

between RM1,000 and RM2,500. Parents who receive a monthly income of RM2501–RM5000 were represented by 56 students (46.7%), while parents who achieved a total of income exceeding RM5001 were represented by 30 students (25.0%). The findings showed that overall respondents in this study came from low-income and intermediate-income families.

3. Findings

Research question 1: What is the level of reading and writing of students in the LINUS program?

Reading and writing level of the students in the LINUS program based on the Ministry of Education standard was as follows: A (80–100%), B (60–79%), C (50–59%), D (40–49%), and E (0–39%).

Based on Table 2, the reading levels of the surveyed students were at a moderate level. There was one (0.08%) student who failed under Grade E with a score of 38%, a student received a Grade D (48%), and 15 (12.5%) students obtained a Grade C with scores ranging from 50% to 59%, whereas 103 (85.8%) students gained Grade B with scores ranging from 60% to 65%, in which the score 65% is the highest mode and score obtained.

The writing level of the researched students was at a moderate level also. One student (0.08%) failed with a score of 37%, four (3.33%) students were under Grade D with scores ranging from 42% to 49%, and 15 (12.5%)

Table 1: Demographic background of respondents

Descriptions (<i>n</i> =120)	f (%)
Gender	
Male	56 (46.7)
Female	64 (53.3)
Ethnic	
Malays	20 (16.7)
Chinese	51 (42.5)
Indians	49 (40.8)
Types of schools	
National primary schools	40 (33.3)
National-type Chinese primary schools	40 (33.3)
National-type Tamil primary schools	40 (33.3)
Family's monthly income	
RM 1 000 – RM 2 500	34 (28.3)
RM 2 501 – RM 5 000	56 (46.7)
> RM 5 000	30 (25.0)

Table 2: Reading score in LINUS program among the students

Score (<i>n</i> =120)	f (%)
38	1 (8)
48	1 (8)
50	2 (1.7)
53	2 (1.7)
55	2 (1.7)
56	1 (8)
58	4 (3.3)
59	4 (3.3)
60	3 (2.5)
61	4 (3.3)
62	7 (5.8)
63	8 (6.7)
64	5 (4.2)
65	76 (63.3)
Total	120 (100)

LINUS: Literacy and numeracy screening

students obtained Grade C with scores ranging from 50% to 59%, whereas 100 (83.33%) students obtained Grade B with scores ranging from 60 to 65%, of which 65% was the mode score and the highest score obtained. Research questions 2: Are there significant differences between ethnic, type of school, and family income with the level of reading and writing in the LINUS program? (Table 3).

Table 3: Writing score in LINUS program among the students

Score (n=120)	f (%)
37	1 (8)
42	1 (8)
47	2 (1.7)
49	1 (8)
50	2 (1.7)
52	1 (8)
54	3 (2.5)
55	2 (1.7)
56	1 (8)
58	3 (2.5)
59	3 (2.5)
60	2 (1.7)
61	5 (4.2)
62	8 (6.7)
63	16 (13.3)
64	19 (15.8)
65	15 (41.7)
Total	120 (100)

LINUS: Literacy and numeracy screening

Table 4 displays the results of ANOVA for reading skills according to social background.

One-way analysis of variance (ANOVA) test in Table 4 shows that there were statistically significant differences $F(3, 116) = 7.56, P < 0.05$, between and within the ethics of the students. This indicates that there was significant difference in mean reading proficiency score among students according to ethnicity. This also means that the mean score of reading among the students in primary schools was influenced by their ethnic group, with Malays who score the best (64.70, SD 0.80), followed by the others (M 64.33, SD 1.15), and the Chinese (M 64.02, SD 2.30), whereas the Indians (M 60.78, SD 5.70) scored the least.

One-way ANOVA test also showed that there were statistically significant differences between school types $F(2, 117) = 10.94, P < 0.05$, with reading levels in LINUS program students. This shows that there were significant differences between the reading tests in LINUS program according to the type of schools. It also proved that the different types of schools gave effect to the reading proficiency of students in LINUS. Reading levels for students of national schools were found the highest (M 64.30, SD 2.03) followed by national-type Chinese students (M 63.82, SD 2.36) and finally national-type Tamil school students (M 62.90, SD 4.19).

Besides that, one-way ANOVA tests showed there were no statistically significant differences between and within groups of students' reading level and family income with $F(2, 117) = 1.18, P > 0.05$. This indicates that there were no significant differences in reading

Table 4: Analysis of one-way ANOVA comparing the reading skills of students according to social background

Variables	Mean±SD		Sum of square	df	Mean square	F	Sig.
Ethnicity							
Malays	64.70±0.80	Between groups	341.13	3	113.71	7.56	0.00*
Chinese	64.02±2.30	Among groups	1745.67	116	15.05		
Indians others	60.78±64.33 5.70±1.15	Total	2086.80	119			
Types of schools							
NS	64.30±2.03	Between groups	328.85	2	164.42	10.94	0.00*
NCS	63.82±2.36	Among groups	1757.95	117	14.01		
NTS	60.57±5.95	Total	2086.80	119			
SES							
Low	62.41±5.43	Between groups	43.31	2	20.66	1.18	0.31
Intermediate	62.66±4.07	Among groups	2045.49	117	17.48		
High	63.90±2.35	Total	2086.80	119			

SES: Socioeconomic status, SD: Standard deviation, ANOVA: Analysis of variance

proficiency among the students in all primary schools with their family income. In other words, the reading score of students in the primary schools in the LINUS program was not influenced by their family income. The highest reading level obtained by the students from families high-income families (M 63.90, SD 2.35) followed by intermediate-income (M 62.66, SD 4.07) and low-income family (M 62.41, SD 5.43). This means that the students who have high SES background family tend to get a higher reading score and vice versa.

Scheffe test in Table 5 indicated that there was a significant difference in mean for reading proficiency score among students according to ethnicity. The mean difference between Malays and Indian at 3.92, Chinese and Indians at 3.24 was statistically significant at $P < 0.01$.

ANOVA test in Table 6 shows that there were statistically significant differences $F(3, 116) = 6.18$, $P < 0.05$, between and within the ethics of the students.

This indicates that there were significant differences in mean score of writing proficiency among students according to ethnicity. This also means that the mean score of reading among the students in primary schools was influenced by their ethnic origin; the other ethnics gained the highest score (M 65.00, SD 0.00), followed by the Chinese (M 63.65, SD 2:49), and the Malays (M 62.90, SD 3.63), whereas the Indians (M 59.76, SD 6.69) scored the least.

ANOVA also showed that there were statistically significant differences between school types ($F(2, 1) = 9.62$, $P < 0.05$) and the students' writing level in the LINUS program. This showed that there were significant differences between the writing tests in LINUS according to the type of schools. It also proved that the different types of schools influenced the writing proficiency among the students in LINUS program. The highest level of writing test scores was attained by the national-type Chinese

Table 5: Scheffe test of the reading skills of students according to social background

Dependent variable	(I) Ethnic	(J) Ethnic	Mean difference (I-J)	Std. Error	Sig.
Reading test					
Scheffe	Malays	Chinese	0.68	1.02	0.93
		Indians	3.92*	1.04	0.00
	Chinese	Malays	-0.68	1.02	0.93
		Indian	3.24*	0.79	0.00
	Indians	Malays	-3.92*	1.04	0.00
		Chinese	-3.24*	0.79	0.00

$P < 0.01$

Table 6: Analysis of one-way ANOVA comparing writing skills of students according to their social background

Variables	Mean±SD		Sum of Square	df	Mean Square	F	Sig.
Ethics							
Malays	62.90±3.63	Between groups	411.65	3	137.22	6.18	0.00*
Chinese	63.65±2.49	Among groups	2575.81	116	22.20		
Indians	59.76±6.69	Total	2987.47	119			
Types of schools							
NS	62.78±3.59	Between groups	421.72	2	210.86	9.62	0.00*
NCS	63.95±1.90	Among groups	2565.75	117	21.93		
NTS	59.50±7.02	Total	2987.47	119			
SES							
Low	61.21±5.91	Between groups	97.11	2	48.56	1.97	1.45
Intermediate	61.79±5.23	Among groups	2890.35	117	24.70		
High	63.57±2.82	Total	2987.47	119			

NS: National schools, NCS: National-type Chinese schools, NTS: National-type tamil schools, SES: Socioeconomic status, SD: Standard deviation, ANOVA: Analysis of variance

schools (M 63.95, SD 1.90) followed by students of the national schools (M 62.78, SD 3.59) and finally students of the national-type Tamil school (M 59.50, SD 7:02).

Besides that, one-way ANOVA tests showed that there were no statistically significant differences between and within the students' writing level and family income with $F(2, 117) = 1.97, P > 0.05$. This indicates that there was no significant difference in writing proficiency among the students in all primary schools with their family income. In other words, the writing means score in LINUS program of the students in primary schools was not influenced by their family income. The highest mean score of writing, however, was obtained by students from high SES family (M 63.57, SD 2.82) followed by intermediate SES (M 61.79, SD 5.23) and the lowest by low SES family (M 61.21, SD 5.91). This meant that students who came from rich families tend to get a higher score in writing tests and vice versa, although the difference was not significant.

Scheffe test in Table 7 indicated that there was a significant difference in mean for writing proficiency score among students according to ethnicity. The mean difference between Chinese and Indians at 3.89 was statistically significant at $P < 0.01$. This indicates that there were significant differences in the mean score of writing proficiency among students according to ethnicity.

4. Discussion and Interpretation

The findings showed that the level of reading and writing of the students was satisfactory. Only one (0.08%) student in this study failed in reading and writing tests; more than 80% of the students gained Grade B in the tests, but the highest score was only 65% for both reading and writing tests. Thus, it meant that student achievement in these tests was average.

The findings indicate that the students have mastered reading and writing skills averagely through the LINUS

program implemented in the schools. Based on the Model of Critical Literacy by Freebody and Luke^[17], students learn the skills of reading and writing through four stages, namely the code breaker, meaning maker, user text, and text analysis. The findings of this study showed that after following the LINUS program for 3 years, the majority of students have mastered the basic literacy skills through the four stages. This was because the instrument was designed to assess and LINUS program was implemented according to the syllabus based on the model of critical literacy. Students could not answer the test questions if they failed to break the code of the words, made the meanings from the picture provided to make words and phrases, made use of the text to read and analyze writing to achieve the objectives. According to Hasnalee^[22], LINUS teachers must possess the expertise to determine student readiness, besides being clear about the level of guidance needed to be delivered to the LINUS students. In addition, it will be valuable for the LINUS teachers to acquire the psycholinguistics method of teaching which emphasizes mental ability and mastery of language. This teaching method can have a deep impact on the LINUS students' reading and comprehension skills. Studies conducted by Jalil et al.^[23] stated that teachers should use effective teaching strategies and plans to attract the students. This condition also made students willing to follow the LINUS class that helped them increase their potential and gain knowledge from the LINUS teachers.

On the other hand, LINUS modules based on the phonetic system emphasize repeating closed and open phonemes every day to help the students master the skills of reading and understanding the words, phrases, and sentences, then build up the writing skills, especially among the poor students. The results of this study showed that the module was effective in achieving its goals. The results support those from the study done by Liu and Todd^[24] that the repeated

Table 7: Scheffe test of the writing skills of students according to social background

Dependent variable	(I) Ethnic	(J) Ethnic	Mean difference (I-J)	Std. Error	Sig.
Writing test					
Scheffe	Malays	Chinese	-0.75	1.24	0.95
		Indians	3.14	1.26	0.11
	Chinese	Malays	0.75	1.24	0.95
		Indians	3.89*	0.96	0.00
	Indians	Malays	-3.14	1.26	0.11
		Chinese	-3.89*	0.96	0.00

$P < 0.01$

reading practice should be best implemented vis-à-vis the purposes of L2 reading and vocabulary learning. Pillinger and Wood^[25] and Mason^[26] revealed repeated reading will increase the improvements of the kindergarten children in writing vocabulary and word reading scores.

Through the LINUS program, the writing proficiency of the students especially the students of national-type Chinese school improved. According to Long^[27], the diversity approach has assisted students in writing, and one of the effective approaches was the process approach which emphasized the writing process, namely prewriting, writing, and revising drafts. Through this approach, the students will engage actively in small groups to realize the writing process, and it resulted in improved writing proficiency especially for the students who attend the LINUS class.

One-way ANOVA analysis found significant differences between the ethnic and type of schools with the reading and writing level of the students under the LINUS program, except for the SES factor. This suggested that the differences of ethnic and type of schools influenced the proficiency of reading and writing among the LINUS program students.

Scheffe test indicated that there was a significant difference in mean for reading proficiency score among students according to ethnicity. Mean differences between Malay and Indians, and between Chinese and Indians were statistically significant at $P < 0.01$. For Malay students, the Malay language is their native language; thus, the reading did not become a major problem, so they got the best results in reading with correct pronunciation.

The results of this study were found similar to the findings by Lopez et al.^[11] who found that reading achievement for students in monolingual of English classroom and developmental bilingual classrooms was stronger than that for students in dual language classrooms. This meant that the students who studied in monolingual environment such as national schools that the Malay language becomes the medium of instruction will capture the language more effectively than the students who learn trilingual in national-type Chinese schools (Chinese, Malay, and English) and national-type Tamil schools (Tamil, Malay, and English); this is because the national schools engage in a wide variety of oral language and literacy activities. This study also showed significant differences between the reading achievement of students in schools

with monolingual and multilingual schools. This is different from the finding by Lopez et al.^[11] that reading achievement for the English learners was not significantly different than that for native English-speaking students.

The irony in the study was that writing skills mastered by the Chinese students were found to be more successful. Scheffe test indicated that there was a significant difference in mean for writing proficiency score among students according to ethnicity. Mean differences between Chinese and Indians were statistically significant at $P < 0.01$. This situation is closely related to the attitude of the Chinese students who are learning the Malay language in earnest to obtain excellent results in the UPSR (national examination in year 6) later. Malay language as the national language is a compulsory pass subject for all the students for boarding secondary schools and institutions of higher education. Therefore, usually, the Chinese students will concentrate on mastering the basic writing skills in the Malay language that is the major assessment component of the subject. Good academic results among the Chinese students were closely related to their attitude of diligence, hard work, and dedication due to the intense competition in the examination. This finding supported that of Lan et al.^[28] and Lindholm-Leary^[29] in the US. Lan et al. revealed that Chinese children outperformed American children on inhibition and attentional control tasks; Lindholm-Leary's^[29] study showed that the Chinese students achieve above grade-level norms and higher than their same school and state peers in English while continuing to develop proficiency skills in Chinese.

In terms of school type, different schools affect the students' score in the reading and writing tests; students in national schools showed the best performance in the reading tests, whereas the national-type Chinese school students showed the highest achievement in the writing tests. This situation showed that the teachers in national schools emphasized more on reading skills and their approaches were more effective than teachers in other schools, whereas the teachers in national-type Chinese schools constantly give drills and train writing skills so that the students score excellently in the Malay language subject that is not their native language^[30].

In contrast, family income did not have much effect on the reading and writing level of students in LINUS program although students from wealthier families tend to master the skills of reading and writing better.

Therefore, high family SES was not necessarily going to produce the students who can master the reading and writing skills. This finding was found similar as the research conducted by Hugo^[31] who found that parental SES did not show much effect on children's listening and reading/writing performance during their elementary school years.

However, this result was totally different from the findings of Solari et al.^[14] who used a large dataset ($n = 1,011,549$) to examine literacy growth over a single school year comparing general education students to three high-risk subgroups: English language learners (ELL), those with a specific learning disability (LD), and those identified as both LD and ELL (LD-ELL) students in Grades 3–10. Results indicated that all high-risk groups began the year at substantially lower levels than their peers, with the largest differences seen between the LD-ELL students and other subgroups. Further results suggested that students who were in the high-risk subgroups and also qualified for FRL perform significantly worse than their peers in similar risk status groups who did not qualify for FRL, demonstrating the significant impact of SES on academic outcomes for all groups.

Differences in the social background of students in terms of the ethnic and different type of schools contributed to the differences in reading proficiency. Therefore, teachers need to be proactive and recognize the students in terms of their background to formulate the appropriate teaching methods that suit the cultural, social situation, and other background of the students, then determine the appropriate teaching methods and teaching aids and help the students to improve their reading and writing proficiency.

What is more important is the positive attitude of the students to learn the language themselves without any coercion from other parties. The students' interest to learn and to read had been planted in the minds of the students to enable them to move to the higher level of reading and writing skills. Lindholm-Leary^[29] examined the language proficiency, literacy development and attitude of Chinese students in TWI programs at late elementary and middle school levels to determine the progress and attitudes of students in these programs. The finding demonstrated that overall the native Chinese speaking, native English speaking and Chinese-speaking students make remarkable progress in languages; score at or above the grade level of English; perform at superior levels compared to non-TWI peers and report interest and knowledge about Chinese culture.

The mindset, motivation, and enthusiasm for learning will encourage the mastery of language literacy. Thus, the percentage of student literacy can be improved.

5. Conclusion

To achieve the targets set in the NKRA, education is largely dependent on the cooperation between government, school administrators, teachers, and parents. Parents and community play an important role in early childhood education. Early childhood education is a fundamental pillar for the children to acquire knowledge and skills in reading and writing literacy. Emerging literacy among children will achieve success in the future that transforms the educational system to ensure the quality of national education improves constantly to produce knowledgeable and skilled human capital. Implementation of the Malaysia Education Blueprint (2013–2025) will make Malaysia achieve international education standards besides turning the students of Malaysia into global players.

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